

CULTURE MEDIUM FOR DETECTING FUNGI AND YEAST, AND METHOD  
FOR PREPARING THE MEDIUM

BACKGROUND OF THE INVENTION

1. Field of the Invention.

The present invention relates to a culture medium or composition for the culturing, detection, counting and identification of microorganisms and more particularly the invention refers to a culture medium or composition for detecting and counting fungi and/or yeast in any kind of installations, most preferably installations employed in the food industry, with the composition basically comprising a solution of monobasic potassium phosphate, ammonium chloride, heptahydrate magnesium sulfate, D(+) saccharose, and water.

While specific reference will be made in this specification to the application of the inventive medium in the food industry, it will be apparent to any person skilled in the art that the invention can be applied into any field where a control of microorganisms, or any other agent such as undesired or pathogenic agent, is to be carried out.

## **2. Description of the Prior Art.**

The food industry, particularly the industry of producing cola beverages, requires of control tests allowing the evaluation of contaminating fungi and yeast that may be present in all and each of the production stages. To date such evaluation is carried out by culturing, in culture mediums, samples taken from the industrial devices or products, and by further analyzing the growing of fungi and/or yeast colonies. To this purpose several culture mediums, such as the Sartorius® dehydrated medium for detecting fungi and yeast and the Bioplast® liquid medium, are employed, the compositions of which mediums being as follows:

Bioplast® liquid medium:

Yeast extract 9.0 g/l  $\pm$  0.5 g/l.

Dextrose 50.0 g/l  $\pm$  0.5 g/l.

Digested pancreatic casein 5.0 g/l  $\pm$  0.5 g/l.

Digested peptides of animal tissue 5.0 g/l  $\pm$  0.5 g/l.

Final pH 4.6  $\pm$  0.2.

Sartorius® dehydrated culture medium:

Yeast extract 9.0 g/l.

Dextrose 50.0 g/l.

Peptone 10.0 g/l.

Magnesium sulfate 2.1 g/l.

Diastase 0.05 g/l.

Thiamine 0.05 g/l.

Final pH 4.6.

In the food or beverages production stages a large number of evaluations must be made to determine the presence of fungi and yeast, this resulting in high costs for the industry using such culture mediums. There is a need, therefore, of having culture medium compositions that would be cheaper but capable of having an efficiency for evaluating colonies that is the same or higher than the culture mediums usually employed in the industry.

#### **SUMMARY OF THE INVENTION**

It is therefore one object of the present invention to provide a culture medium comprising:

- i. between about 4.5 g/l and about 5.5 g/l of monobasic potassium phosphate;
- ii. between about 0.5 g/l and about 1.5 g/l of ammonium chloride;
- iii. between about 0.5 g/l and about 1.5 g/l of heptahydrate magnesium sulfate;

iv. between about 30.0 g/l and about 50.0 g/l of D(+) saccharose, and

v. water, wherein the pH of the medium may be between 4.5 and 5.5.

It is even another object of the present invention to provide a method of preparing a culture medium comprising between about 4.5 g/l and about 5.5 g/l of monobasic potassium phosphate; between about 0.5 g/l and about 1.5 g/l of ammonium chloride; between about 0.5 g/l and about 1.5 g/l of heptahydrate magnesium sulfate; between about 30.0 g/l and about 50.0 g/l of D(+) saccharose, and water, wherein the method comprises the steps of:

a. obtaining a solution by dissolving in ultra pure water, under agitation, the monobasic potassium phosphate, the ammonium chloride, the heptahydrate magnesium sulfate and the saccharose;

b. adjusting the pH of the solution obtained in step a. to 5.0, and

c. sterilizing the solution and conserving the solution at a temperature of 4°C.

It is still another object of the present invention to provide a culture medium composition for detecting fungi and/or yeast in installations, the composition comprising monobasic potassium phosphate, ammonium chloride, heptahydrate magnesium sulfate, D(+) saccharose, and water.

It is a further object of the present invention to provide a culture medium composition for detecting fungi and/or yeast in several installations, preferably food and/or beverages industry installations, wherein the fungi and yeast are selected from the group consisting of *Basillus Subtilis*, *Candida Albicans*, *Saccharomyces Cerevisiae*, *Saccharomyces Uvarum*, *Rhodotorula Rubra*, *Penicillium Camemberti*, *Aspergillus Niger*, *Trychophyton Ajelloi* and *Geotrichum Candidum*.

It is even a further object of the present invention to provide a method of preparing a culture medium comprising monobasic potassium phosphate, ammonium chloride, heptahydrate magnesium sulfate, D(+) saccharose, and water, wherein the method comprises the steps of:

a. obtaining a solution by dissolving in ultra pure water, under agitation, the monobasic potassium phosphate, the ammonium chloride, the heptahydrate magnesium sulfate and the saccharose;

b. adjusting the pH of the solution obtained in step a. to 5.0, and

c. sterilizing the solution and conserving the solution at a temperature of 4°C.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is illustrated by way of example in the following drawings wherein:

FIG. 1a is a photo showing the development of microorganisms colonies of one sample after 3 days of culturing by employing the culture medium composition of the invention, and

FIG. 1b is a photo showing the development of microorganisms colonies of one sample after 3 days of culturing by employing the culture medium Sartorius®.

#### **DESCRIPTION OF THE PREFERRED EMBODIMENTS**

The inventive composition may be employed for evaluating, in the food industry, the presence of contaminating fungi and yeast. In a preferred embodiment the composition of the invention is employed for growing and counting fungi and yeast colonies in the cola beverages industry, for instance by taking samples in each of the production stages or by taking samples from the products employed in the process for elaborating the beverages.

Any expert in the art will understand that the culture medium composition of the invention may be used for culturing a variety of organisms, such as fungi and yeast, in a number of different industrial processes including processes for elaborating beverages, food products and other products where the presence of said organisms must be kept under control.

With the purpose of testing the effectiveness of the inventive composition as compared to other commercial culture mediums, a number of fungi and yeast cultures have been prepared from different dilutions of a mother solution containing microorganisms obtained from isolated colonies.

The test results are shown in the following Table:

Table 1

	Sartorius®	Bioplast®	Composition of the invention
Target	0 ufc	0 ufc	0 ufc
Concentrated	TNTC	TNTC	TNTC
$1/10^2$	TNTC	TNTC	TNTC
$1/10^4$	25 ufc	TNTC	TNTC
$1/10^6$	0 ufc	106 ufc	109 ufc
$1/10^8$	0 ufc	4 ufc	6 ufc
$1/10^{10}$	0 ufc	0 ufc	0 ufc
$1/10^{12}$	0 ufc	0 ufc	0 ufc
$1/10^{14}$	0 ufc	0 ufc	0 ufc
$1/10^{16}$	0 ufc	0 ufc	0 ufc
$1/10^{18}$	0 ufc	0 ufc	0 ufc
$1/10^{20}$	0 ufc	0 ufc	0 ufc

To the purpose of the present specification the term "TNTC" means "too much colonies to be counted".

As may be seen from the above Table the inventive composition complied with exigent requirements for the culturing tests of microorganisms present in the cola beverages production plants, thus permitting the proper growing not only of fungi but also of yeast, and also

providing a proper medium insofar as the nutrients availability, humidity and pH.

While the medium Sartorius® did not provide a response to samples having a very low contamination, the culture medium Bioplast® and the composition of the invention did not have obstacles in evidencing the contamination that was present in the solution at low concentrations.

It was also observed that the colonies grown in the inventive medium had dimensions smaller than the ones of the other mediums; this feature permitted to more easily count the colonies in high contamination levels because the colonies did not form an homogeneous layer on the culture membrane (Figures 1a and 1b).

The colonies counted in the analyzed plates were similar and almost the same for three tests.

Before carrying out the above mentioned tests, a number of evaluations consisting of comparing the culture mediums Sartorius®, Bioplast® and the one of the invention have been made with samples taken from filling machines in the production lines, thus guaranteeing in a larger extent the efficiency and quality of the inventive culture medium composition.

The tests results are shown in the following Table.

Table 2

	Medium Sartorius®	Composition of the invention
Valve n° 15	00 ufc	04 ufc
Valve n° 30	00 ufc	08 ufc
Valve n° 45	00 ufc	05 ufc
Valve n° 60	00 ufc	07 ufc

It is apparent from the above results that the culture composition of the invention provides a response that is better than the one of the commercial medium in the detection of microorganisms when the same are present in a very low concentration.

When the composition of the invention has been compared to the commercial culture mediums Sartorius® and Bioplast® in connection to the response to high and low concentrations of fungi the following results have been found:

Table 3

Sample No.	Contamination degree	Culture Medium		
		Sartorius®	Bioplast®	Invention
1	High	TNTC	TNTC	TNTC
2	High	TNTC	TNTC	TNTC
3	High	TNTC	TNTC	TNTC
4	High	TNTC	TNTC	TNTC
5	High	TNTC	TNTC	TNTC
6	High	TNTC	TNTC	TNTC
7	Low	05 ufc	04 ufc	04 ufc

From the results in the above Table 3 it may be seen that either in samples with low microbial concentrations as well as in samples with excessive

contamination the inventive composition provides a response similar to the other tested mediums, comparatively giving an equivalent amount of ufc.

A particular feature of this new culture medium composition is the size that the colonies have when growing in the inventive medium. For contaminations having values of about 300 - 400 ufc, the colonies developed in mediums Sartorius® and Bioplast® have a considerable size or dimension producing a homogeneous and continuous layer formed in the medium thus preventing the colonies from being counted. For the same amount of colonies the composition of the invention allows a correct counting of colonies because the colonies are of smaller size and are spaced apart from each other.

The above mentioned test results show that the composition of the invention is effective for the counting of fungi and yeast commonly found in the food industry and more preferably for the counting of fungi and yeast that are present in the production lines of cola beverages.

The 500 comparative tests in the following Table show that the composition of the invention has a fungi and yeast detection level that is equal or superior to the one of available commercial culture mediums.

Table 4

Test #	Date	Sector	Equipment	Sample Type	Inventive Composition	Bioplast®	Sartorius®
1	8-Nov.-01	Unloading	Transport	Fructose	01 ufc	-	00 ufc
2	8-Nov.-01	Unloading	Transport	Fructose	00 ufc	-	01 ufc
3	8-Nov.-01	Unloading	Transport	Fructose	02 ufc	-	03 ufc
4	8-Nov.-01	Unloading	Transport	Fructose	02 ufc	-	02 ufc
5	8-Nov.-01	Unloading	Transport	Fructose	01 ufc	-	01 ufc
6	8-Nov.-01	Unloading	Transport	Fructose	00 ufc	-	02 ufc
7	9-Nov.-01	Bottling	Filling Valve	Sanitation Water	05 ufc	-	08 ufc
8	9-Nov.-01	Bottling	Filling Valve	Sanitation Water	02 ufc	-	06 ufc
9	9-Nov.-01	Bottling	Filling Valve	Sanitation Water	10 ufc	-	03 ufc
10	9-Nov.-01	Bottling	Filling Valve	Sanitation Water	07 ufc	-	09 ufc
11	10-Nov.-01	Bottling	Filling Valve	Sanitation Water	10 ufc	-	09 ufc
12	10-Nov.-01	Bottling	Filling Valve	Sanitation Water	08 ufc	-	07 ufc
13	10-Nov.-01	Bottling	Filling Valve	Sanitation Water	08 ufc	-	05 ufc
14	10-Nov.-01	Bottling	Filling Valve	Sanitation Water	11 ufc	-	13 ufc
15	<u>11-Nov.-01</u>	<u>Quality Control</u>	<u>Laboratory</u>	<u>Prepared</u>	<u>23 ufc</u>	<u>-</u>	<u>87 ufc</u>
16	<u>11-Nov.-01</u>	<u>Quality Control</u>	<u>Laboratory</u>	<u>Prepared</u>	<u>62 ufc</u>	<u>-</u>	<u>117 ufc</u>
17	<u>11-Nov.-01</u>	<u>Quality Control</u>	<u>Laboratory</u>	<u>Prepared</u>	<u>56 ufc</u>	<u>-</u>	<u>99 ufc</u>
18	<u>11-Nov.-01</u>	<u>Quality Control</u>	<u>Laboratory</u>	<u>Prepared</u>	<u>26 ufc</u>	<u>-</u>	<u>88 ufc</u>
19	<u>11-Nov.-01</u>	<u>Quality Control</u>	<u>Laboratory</u>	<u>Prepared</u>	<u>54 ufc</u>	<u>-</u>	<u>83 ufc</u>
20	20-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
21	20-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
22	20-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
23	20-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
24	20-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
25	21-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
26	21-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
27	21-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
28	21-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
29	21-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
30	23-Nov.-01	Bottling	Filling Valve	Sanitation Water	01 ufc	-	01 ufc
31	23-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	-	03 ufc
32	23-Nov.-01	Bottling	Filling Valve	Sanitation Water	01 ufc	-	01 ufc

33	24-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	-	00 ufc
34	24-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	-	00 ufc
35	24-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc		00 ufc
36	26-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
37	26-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
38	26-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
39	26-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
40	26-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
41	28-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
42	28-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
43	28-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
44	28-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
45	28-Nov.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	TNTC
46	29-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	00 ufc
47	29-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	00 ufc
48	29-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	00 ufc
49	29-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	00 ufc
50	29-Nov.-01	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	00 ufc
51	28-Jan.-02	Bottling	Filling Valve	Sanitation Water	04 ufc	-	00 ufc
52	28-Jan.-02	Bottling	Filling Valve	Sanitation Water	08 ufc	-	01 ufc
53	28-Jan.-02	Bottling	Filling Valve	Sanitation Water	05 ufc	-	01 ufc
54	28-Jan.-02	Bottling	Filling Valve	Sanitation Water	07 ufc	-	00 ufc
55	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
56	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
57	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
58	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
59	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
60	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
61	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
62	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
63	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
64	4-Mar.-02	Quality Control	Laboratory	Prepared	TNTC	-	TNTC
65	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
66	8-Feb.-02	Quality	Laboratory	Prepared	TNTC	TNTC	-

		Control					
67	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
68	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
69	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
70	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
71	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
72	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
73	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
74	8-Feb.-02	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
75	19-Mar.-01	Quality Control	Laboratory	Common Water	19 ufc	17 ufc	-
76	19-Mar.-01	Quality Control	Laboratory	Common Water	26 ufc	23 ufc	-
77	19-Mar.-01	Quality Control	Laboratory	Common Water	17 ufc	20 ufc	-
78	19-Mar.-01	Quality Control	Laboratory	Common Water	23 ufc	14 ufc	-
79	19-Mar.-01	Quality Control	Laboratory	Common Water	20 ufc	16 ufc	-
80	19-Mar.-01	Quality Control	Laboratory	Common Water	24 ufc	25 ufc	-
81	26-Mar.-02	Water Sector	Tank 1050	Raw Water	01 ufc	01 ufc	-
82	26-Mar.-02	Quality Control	Laboratory	Water	00 ufc	00 ufc	-
83	26-Mar.-02	Quality Control	Laboratory	Common Water	01 ufc	02 ufc	-
84	26-Mar.-02	Water Room	Outlet FP1	Treated Water	02 ufc	01 ufc	-
85	26-Mar.-02	Water Room	Tank 600	Chlorinated Water	00 ufc	00 ufc	-
86	27-Mar.-02	Water Room	Outlet FP1	Treated Water	00 ufc	00 ufc	-
87	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	02 ufc	01 ufc	-
88	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	01 ufc	01 ufc	-
89	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
90	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
91	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	05 ufc	03 ufc	-
92	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	03 ufc	04 ufc	-
93	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
94	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
95	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
96	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
97	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	01 ufc	-
98	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	01 ufc	01 ufc	-
99	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-

100	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	03 ufc	01 ufc	-
101	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	05 ufc	02 ufc	-
102	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	02 ufc	01 ufc	-
103	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	02 ufc	03 ufc	-
104	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
105	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
106	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
107	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
108	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	02 ufc	00 ufc	-
109	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	03 ufc	02 ufc	-
110	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	01 ufc	-
111	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	01 ufc	-
112	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
113	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
114	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
115	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
116	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
117	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	02 ufc	02 ufc	-
118	27-Mar.-02	Bottling	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
119	27-Mar.-02	Bottling	Tank JT	Sanitation Water	00 ufc	02 ufc	-
120	27-Mar.-02	Bottling	Tank JT	Sanitation Water	07 ufc	05 ufc	-
121	27-Mar.-02	Bottling	Tank JT	Sanitation Water	02 ufc	03 ufc	-
122	27-Mar.-02	Bottling	Tank JT	Sanitation Water	00 ufc	00 ufc	-
123	27-Mar.-02	Bottling	Tank JT	Sanitation Water	02 ufc	01 ufc	-
124	27-Mar.-02	Bottling	Tank JT	Sanitation Water	02 ufc	01 ufc	-
125	27-Mar.-02	Bottling	Tank JT	Sanitation Water	00 ufc	01 ufc	-
126	27-Mar.-02	Bottling	Tank JT	Sanitation Water	03 ufc	01 ufc	-
127	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	03 ufc	00 ufc	-
128	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	02 ufc	01 ufc	-
129	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	00 ufc	00 ufc	-
130	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	01 ufc	00 ufc	-
131	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	02 ufc	04 ufc	-
132	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	01 ufc	02 ufc	-
133	27-Mar.-02	Bottling	Beverage	Sanitation	00 ufc	00 ufc	-

			Tank	Water			
134	27-Mar.-02	Bottling	Beverage Tank	Sanitation Water	02 ufc	00 ufc	-
135	27-Mar.-02	Bottling	Final Product	Schweppes Tonic	00 ufc	00 ufc	-
136	27-Mar.-02	Bottling	Final Product	Schweppes Tonic	00 ufc	01 ufc	-
137	27-Mar.-02	Bottling	Final Product	Schweppes Tonic	00 ufc	00 ufc	-
138	27-Mar.-02	Bottling	Final Product	Schweppes Tonic	01 ufc	00 ufc	-
139	27-Mar.-02	Bottling	Final Product	Schweppes Tonic	00 ufc	00 ufc	-
140	27-Mar.-02	Bottling	Final Product	Schweppes Tonic	00 ufc	00 ufc	-
141	27-Mar.-02	Bottling	Final Product	Schweppes Citrus	02 ufc	00 ufc	-
142	27-Mar.-02	Bottling	Final Product	Schweppes Citrus	00 ufc	00 ufc	-
143	27-Mar.-02	Bottling	Final Product	Schweppes Citrus	00 ufc	00 ufc	-
144	27-Mar.-02	Bottling	Final Product	Schweppes Citrus	00 ufc	00 ufc	-
145	27-Mar.-02	Bottling	Final Product	Schweppes Citrus	00 ufc	01 ufc	-
146	27-Mar.-02	Bottling	Final Product	Schweppes Citrus	00 ufc	01 ufc	-
147	27-Mar.-02	Bottling	Final Product	Schweppes Ginger Ale	00 ufc	00 ufc	-
148	27-Mar.-02	Bottling	Final Product	Schweppes Ginger Ale	00 ufc	00 ufc	-
149	27-Mar.-02	Bottling	Final Product	Schweppes Ginger Ale	00 ufc	00 ufc	-
150	27-Mar.-02	Bottling	Final Product	Schweppes Ginger Ale	00 ufc	02 ufc	-
151	27-Mar.-02	Bottling	Final Product	Schweppes Ginger Ale	00 ufc	00 ufc	-
152	27-Mar.-02	Bottling	Final Product	Schweppes Ginger Ale	00 ufc	00 ufc	-
153	27-Mar.-02	Bottling	Final Product	Tai Pink Grapefruit	00 ufc	01 ufc	-
154	27-Mar.-02	Bottling	Final Product	Tai Pink Grapefruit	00 ufc	00 ufc	-
155	27-Mar.-02	Bottling	Final Product	Tai Pink Grapefruit	00 ufc	00 ufc	-
156	27-Mar.-02	Bottling	Final Product	Tai Pink Grapefruit	00 ufc	00 ufc	-
157	27-Mar.-02	Bottling	Final Product	Tai Pink Grapefruit	00 ufc	00 ufc	-
158	27-Mar.-02	Bottling	Final Product	Tai Pink Grapefruit	00 ufc	00 ufc	-
159	27-Mar.-02	Syrup Room	Contimol	Sanitation Water	00 ufc	00 ufc	-
160	27-Mar.-02	Syrup Room	Pasteurizer	Sanitation Water	01 ufc	00 ufc	-
161	27-Mar.-02	Syrup Room	Filter TLG	Sanitation Water	00 ufc	00 ufc	-
162	27-Mar.-02	Syrup Room	Tank Buffer	Sanitation Water	03 ufc	02 ufc	-
163	27-Mar.-02	Syrup Room	Gravimol 1	Sanitation Water	02 ufc	01 ufc	-
164	27-Mar.-02	Syrup Room	Gravimol 1	Sanitation Water	05 ufc	02 ufc	-
165	27-Mar.-02	Syrup Room	Gravimol 1	Sanitation Water	06 ufc	05 ufc	-
166	27-Mar.-02	Syrup Room	Gravimol 1	Sanitation Water	09 ufc	06 ufc	-

167	27-Mar.-02	Syrup Room	Gravimol 1	Sanitation Water	01 ufc	00 ufc	-
168	27-Mar.-02	Syrup Room	Tank JS 1	Sanitation Water	00 ufc	00 ufc	-
169	27-Mar.-02	Syrup Room	Tank JT 10	Sanitation Water	00 ufc	00 ufc	-
170	27-Mar.-02	Syrup Room	Tank JT 5	Sanitation Water	01 ufc	00 ufc	-
171	27-Mar.-02	Syrup Room	Tank JT 4	Sanitation Water	02 ufc	00 ufc	-
172	27-Mar.-02	Syrup Room	Tank JT 2	Sanitation Water	04 ufc	05 ufc	-
173	27-Mar.-02	Syrup Room	Tank JT 1	Sanitation Water	00 ufc	02 ufc	-
174	27-Mar.-02	Syrup Room	Tank JT 6	Sanitation Water	03 ufc	00 ufc	-
175	27-Mar.-02	Syrup Room	Tank JT 1	Sanitation Water	06 ufc	03 ufc	-
176	27-Mar.-02	Syrup Room	Tank JT 5	Sanitation Water	06 ufc	02 ufc	-
177	27-Mar.-02	Syrup Room	Dispenser Line	Sanitation Water	02 ufc	01 ufc	-
178	27-Mar.-02	Unloading	Transport	Fructose	00 ufc	01 ufc	-
179	27-Mar.-02	Unloading	Transport	Fructose	02 ufc	04 ufc	-
180	27-Mar.-02	Unloading	Transport	Fructose	03 ufc	01 ufc	-
181	27-Mar.-02	Unloading	Transport	Fructose	00 ufc	01 ufc	-
182	27-Mar.-02	Unloading	Transport	Fructose	01 ufc	02 ufc	-
183	27-Mar.-02	Unloading	Transport	Fructose	00 ufc	00 ufc	-
184	27-Mar.-02	Syrup Room	Tank JT	Coca Cola	00 ufc	01 ufc	-
185	27-Mar.-02	Syrup Room	Tank JT	Coca Cola Light	01 ufc	00 ufc	-
186	27-Mar.-02	Syrup Room	Tank JT	Schweppes Citrus	00 ufc	00 ufc	-
187	27-Mar.-02	Syrup Room	Tank JT	Coca Cola	02 ufc	00 ufc	-
188	27-Mar.-02	Syrup Room	Tank JT	Coca Cola	00 ufc	01 ufc	-
189	27-Mar.-02	Syrup Room	Tank JT	Coca Cola Light	02 ufc	01 ufc	-
190	27-Mar.-02	Syrup Room	Tank JT	Schweppes Ginger Ale	01 ufc	01 ufc	-
191	27-Mar.-02	Syrup Room	Tank JT	Coca Cola Light	03 ufc	00 ufc	-
192	27-Mar.-02	Syrup Room	Tank JT	Coca Cola	00 ufc	02 ufc	-
193	27-Mar.-02	Syrup Room	Tank JT	Tai Pink Grapefruit	00 ufc	00 ufc	-
194	27-Mar.-02	Syrup Room	Tank JT	Coca Cola Light	00 ufc	00 ufc	-
195	27-Mar.-02	Syrup Room	Tank JT	Coca Cola	00 ufc	01 ufc	-
196	27-Mar.-02	Syrup Room	Tank JT	Coca Cola	01 ufc	00 ufc	-
197	28-Mar.-02	Unloading	Transport	Fructose	00 ufc	01 ufc	-
198	28-Mar.-02	Unloading	Transport	Fructose	01 ufc	00 ufc	-
199	28-Mar.-02	Unloading	Transport	Fructose	04 ufc	01 ufc	-
200	28-Mar.-02	Unloading	Transport	Fructose	02 ufc	00 ufc	-
201	12-Apr.-02	Water Room	Outlet PC1	Treated Water	00 ufc	02 ufc	-
202	12-Apr.-02	Water Room	Outlet PC2	Treated Water	03 ufc	04 ufc	-
203	12-Apr.-02	Water Room	Outlet PC3	Treated Water	00 ufc	04 ufc	-
204	12-Apr.-02	Water Room	Outlet PC4	Treated Water	00 ufc	01 ufc	-
205	12-Apr.-02	Water Room	Outlet FP1	Treated Water	00 ufc	00 ufc	-
206	12-Apr.-02	Water Room	Outlet FP2	Treated Water	00 ufc	00 ufc	-
207	12-Apr.-02	Water Room	Outlet FP3	Treated Water	02 ufc	00 ufc	-
208	12-Apr.-02	Water Room	Outlet FP4	Treated	00 ufc	00 ufc	-

				Water			
209	12-Apr.-02	Water Room	Tank 600	Treated Water	00 ufc	00 ufc	-
210	12-Apr.-02	Water Room	Tank 1050	Raw Water	00 ufc	00 ufc	-
211	12-Apr.-02	Water Room	Inlet FP1	Treated Water	00 ufc	02 ufc	-
212	12-Apr.-02	Water Room	Inlet FP2	Treated Water	00 ufc	01 ufc	-
213	16-Apr.-02	Quality Control	Laboratory	Prepared	36 ufc	-	44 ufc
214	16-Apr.-02	Quality Control	Laboratory	Prepared	42 ufc	-	41 ufc
215	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
216	16-Apr.-02	Quality Control	Laboratory	Prepared	01 ufc	-	00 ufc
217	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	03 ufc
218	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
219	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
220	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
221	16-Apr.-02	Quality Control	Laboratory	Prepared	01 ufc	-	01 ufc
222	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
223	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
224	16-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	-	00 ufc
225	23-Apr.-02	Quality Control	Laboratory	Prepared	63 ufc	58 ufc	-
226	23-Apr.-02	Quality Control	Laboratory	Prepared	52 ufc	55 ufc	-
227	23-Apr.-02	Quality Control	Laboratory	Prepared	36 ufc	30 ufc	-
228	23-Apr.-02	Quality Control	Laboratory	Prepared	15 ufc	09 ufc	-
229	23-Apr.-02	Quality Control	Laboratory	Prepared	02 ufc	00 ufc	-
230	23-Apr.-02	Quality Control	Laboratory	Prepared	08 ufc	04 ufc	-
231	23-Apr.-02	Quality Control	Laboratory	Prepared	22 ufc	17 ufc	-
232	23-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
233	23-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
234	23-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
235	23-Apr.-02	Quality Control	Laboratory	Prepared	12 ufc	10 ufc	-
236	23-Apr.-02	Quality Control	Laboratory	Prepared	126 ufc	131 ufc	-
237	23-Apr.-02	Quality Control	Laboratory	Prepared	98 ufc	106 ufc	-
238	23-Apr.-02	Quality Control	Laboratory	Prepared	82 ufc	80 ufc	-
239	23-Apr.-02	Quality Control	Laboratory	Prepared	41 ufc	35 ufc	-
240	23-Apr.-02	Quality Control	Laboratory	Prepared	37 ufc	42 ufc	-
241	23-Apr.-02	Quality Control	Laboratory	Prepared	30 ufc	35 ufc	-
242	23-Apr.-02	Quality	Laboratory	Prepared	22 ufc	16 ufc	-

		Control					
243	23-Apr.-02	Quality Control	Laboratory	Prepared	27 ufc	20 ufc	-
244	23-Apr.-02	Quality Control	Laboratory	Prepared	29 ufc	21 ufc	-
245	23-Apr.-02	Quality Control	Laboratory	Prepared	23 ufc	27 ufc	-
246	23-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
247	23-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
248	23-Apr.-02	Quality Control	Laboratory	Prepared	02 ufc	00 ufc	-
249	23-Apr.-02	Quality Control	Laboratory	Prepared	01 ufc	00 ufc	-
250	23-Apr.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
251	3-May.-02	Syrup Room	Gravimol 1	Sanitation Water	03 ufc	01 ufc	-
252	3-May.-02	Syrup Room	Gravimol 1	Sanitation Water	00 ufc	01 ufc	-
253	3-May.-02	Syrup Room	Gravimol 1	Sanitation Water	02 ufc	01 ufc	-
254	3-May.-02	Syrup Room	Gravimol 2	Sanitation Water	02 ufc	03 ufc	-
255	3-May.-02	Syrup Room	Gravimol 2	Sanitation Water	00 ufc	00 ufc	-
256	3-May.-02	Syrup Room	Gravimol 2	Sanitation Water	02 ufc	02 ufc	-
257	3-May.-02	Syrup Room	Gravimol 2	Sanitation Water	04 ufc	02 ufc	-
258	3-May.-02	Syrup Room	Gravimol 2	Sanitation Water	04 ufc	04 ufc	-
259	3-May.-02	Syrup Room	Tank JT 6	Sanitation Water	01 ufc	01 ufc	-
260	3-May.-02	Syrup Room	Tank JT 1	Sanitation Water	03 ufc	00 ufc	-
261	3-May.-02	Syrup Room	Tank JT 7	Sanitation Water	01 ufc	03 ufc	-
262	3-May.-02	Syrup Room	Tank JT 8	Sanitation Water	00 ufc	01 ufc	-
263	3-May.-02	Syrup Room	Tank JT 11	Sanitation Water	00 ufc	01 ufc	-
264	3-May.-02	Syrup Room	Tank JT 3	Sanitation Water	01 ufc	02 ufc	-
265	3-May.-02	Syrup Room	Tank JT 2	Sanitation Water	04 ufc	01 ufc	-
266	3-May.-02	Syrup Room	Tank JT 7	Sanitation Water	02 ufc	02 ufc	-
267	3-May.-02	Unloading	Transport	Fructose	00 ufc	00 ufc	-
268	3-May.-02	Unloading	Transport	Fructose	02 ufc	01 ufc	-
269	3-May.-02	Unloading	Transport	Fructose	02 ufc	00 ufc	-
270	3-May.-02	Unloading	Transport	Fructose	00 ufc	00 ufc	-
271	3-May.-02	Unloading	Transport	Fructose	00 ufc	00 ufc	-
272	3-May.-02	Unloading	Transport	Fructose	01 ufc	02 ufc	-
273	3-May.-02	Unloading	Transport	Fructose	01 ufc	00 ufc	-
274	3-May.-02	Unloading	Transport	Fructose	00 ufc	00 ufc	-
275	3-May.-02	Unloading	Transport	Fructose	01 ufc	02 ufc	-
276	3-May.-02	Unloading	Transport	Fructose	05 ufc	02 ufc	-
277	3-May.-02	Unloading	Transport	Fructose	04 ufc	02 ufc	-
278	3-May.-02	Unloading	Transport	Fructose	00 ufc	01 ufc	-
279	3-May.-02	Syrup Room	Tank JT	Fanta Orange	00 ufc	00 ufc	-
280	3-May.-02	Syrup Room	Tank JT	Tai Lime Lemon	00 ufc	00 ufc	-
281	3-May.-02	Syrup Room	Tank JT	Fanta Tonic	00 ufc	01 ufc	-
282	3-May.-02	Syrup Room	Tank JT	Coca Cola	01 ufc	00 ufc	-

				Light			
283	3-May.-02	Syrup Room	Tank JT	Sprite Light	00 ufc	00 ufc	-
284	3-May.-02	Syrup Room	Tank JT	Sprite	01 ufc	00 ufc	-
285	3-May.-02	Syrup Room	Tank JT	Coca Cola Light	00 ufc	00 ufc	-
286	3-May.-02	Syrup Room	Tank JT	Coca Cola	02 ufc	03 ufc	-
287	3-May.-02	Syrup Room	Tank JT	Fanta Orange	00 ufc	00 ufc	-
288	3-May.-02	Syrup Room	Tank JT	Sprite	00 ufc	00 ufc	-
289	3-May.-02	Syrup Room	Tank JT	Coca Cola	03 ufc	02 ufc	-
290	3-May.-02	Syrup Room	Tank JT	Coca Cola Light	00 ufc	00 ufc	-
291	3-May.-02	Syrup Room	Tank JT	Quattro Grapefruit	03 ufc	03 ufc	-
292	7-May.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
293	7-May.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
294	7-May.-02	Quality Control	Laboratory	Prepared	01 ufc	00 ufc	-
295	7-May.-02	Quality Control	Laboratory	Prepared	04 ufc	02 ufc	-
296	7-May.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
297	7-May.-02	Quality Control	Laboratory	Prepared	04 ufc	04 ufc	-
298	7-May.-02	Quality Control	Laboratory	Prepared	00 ufc	01 ufc	-
299	7-May.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
300	7-May.-02	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
301	16-May.-02	Quality Control	Laboratory	Prepared	05 ufc	03 ufc	-
302	16-May.-02	Quality Control	Laboratory	Prepared	03 ufc	00 ufc	-
303	16-May.-02	Quality Control	Laboratory	Prepared	09 ufc	06 ufc	-
304	16-May.-02	Quality Control	Laboratory	Prepared	07 ufc	05 ufc	-
305	16-May.-02	Quality Control	Laboratory	Prepared	05 ufc	08 ufc	-
306	16-May.-02	Quality Control	Laboratory	Prepared	06 ufc	03 ufc	-
307	16-May.-02	Quality Control	Laboratory	Prepared	02 ufc	00 ufc	-
308	16-May.-02	Quality Control	Laboratory	Prepared	04 ufc	01 ufc	-
309	16-May.-02	Quality Control	Laboratory	Prepared	09 ufc	07 ufc	-
310	16-May.-02	Quality Control	Laboratory	Prepared	07 ufc	02 ufc	-
311	16-May.-02	Quality Control	Laboratory	Prepared	86 ufc	79 ufc	-
312	16-May.-02	Quality Control	Laboratory	Prepared	112 ufc	104 ufc	-
313	16-May.-02	Quality Control	Laboratory	Prepared	93 ufc	108 ufc	-
314	16-May.-02	Quality Control	Laboratory	Prepared	90 ufc	99 ufc	-
315	16-May.-02	Quality Control	Laboratory	Prepared	78 ufc	81 ufc	-
316	16-May.-02	Quality Control	Laboratory	Prepared	101 ufc	89 ufc	-
317	16-May.-02	Quality Control	Laboratory	Prepared	91 ufc	82 ufc	-
318	16-May.-02	Quality	Laboratory	Prepared	88 ufc	90 ufc	-

		Control					
319	16-May.-02	Quality Control	Laboratory	Prepared	94 ufc	90 ufc	-
320	16-May.-02	Quality Control	Laboratory	Prepared	96 ufc	84 ufc	-
321	29-May.-01	Bottling	Filling Valve	Sanitation Water	08 ufc	05 ufc	-
322	29-May.-01	Bottling	Filling Valve	Sanitation Water	10 ufc	07 ufc	-
323	29-May.-01	Bottling	Filling Valve	Sanitation Water	06 ufc	05 ufc	-
324	29-May.-01	Bottling	Filling Valve	Sanitation Water	05 ufc	08 ufc	-
325	29-May.-01	Bottling	Filling Valve	Sanitation Water	06 ufc	03 ufc	-
326	29-May.-01	Bottling	Filling Valve	Sanitation Water	05 ufc	07 ufc	-
327	29-May.-01	Bottling	Filling Valve	Sanitation Water	07 ufc	07 ufc	-
328	29-May.-01	Bottling	Filling Valve	Sanitation Water	09 ufc	06 ufc	-
329	29-May.-01	Bottling	Filling Valve	Sanitation Water	02 ufc	00 ufc	-
330	29-May.-01	Bottling	Filling Valve	Sanitation Water	04 ufc	06 ufc	-
331	29-May.-01	Bottling	Filling Valve	Sanitation Water	05 ufc	02 ufc	-
332	29-May.-01	Bottling	Filling Valve	Sanitation Water	08 ufc	08 ufc	-
333	14-June.-01	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	00 ufc
334	14-June.-01	Quality Control	Laboratory	Prepared	15 ufc	09 ufc	09 ufc
335	14-June.-01	Quality Control	Laboratory	Prepared	15 ufc	18 ufc	16 ufc
336	14-June.-01	Quality Control	Laboratory	Prepared	01 ufc	01 ufc	00 ufc
337	14-June.-01	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	00 ufc
338	14-June.-01	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	00 ufc
339	3-July.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
340	3-July.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
341	3-July.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
342	3-July.-01	Quality Control	Laboratory	Prepared	01 ufc	00 ufc	-
343	3-July.-01	Quality Control	Laboratory	Prepared	00 ufc	00 ufc	-
344	3-July.-01	Quality Control	Laboratory	Prepared	TNTC	TNTC	-
345	24-July.-02	Line 2	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
346	24-July.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	05 ufc	-
347	24-July.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	02 ufc	-
348	24-July.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	01 ufc	-
349	25-July.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	03 ufc	-
350	25-July.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	04 ufc	-
351	25-July.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	01 ufc	-

52	25-July.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	03 ufc	-
353	25-July.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	08 ufc	-
354	25-July.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	10 ufc	-
355	25-July.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	07 ufc	-
356	25-July.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	07 ufc	-
357	25-July.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	08 ufc	-
358	25-July.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	08 ufc	-
359	25-July.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	07 ufc	-
360	25-July.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	08 ufc	-
361	26-July.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	06 ufc	-
362	26-July.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	05 ufc	-
363	26-July.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	07 ufc	-
364	26-July.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	07 ufc	-
365	27-July.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	06 ufc	-
366	27-July.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	06 ufc	-
367	27-July.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	02 ufc	-
368	27-July.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	06 ufc	-
369	29-July.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	02 ufc	-
370	29-July.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	03 ufc	-
371	29-July.-02	Line 2	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
372	29-July.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	05 ufc	-
373	29-July.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	08 ufc	-
374	29-July.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	09 ufc	-
375	29-July.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	07 ufc	-
376	29-July.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	08 ufc	-
377	30-July.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	09 ufc	-
378	30-July.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	08 ufc	-
379	30-July.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	06 ufc	-
380	30-July.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	08 ufc	-
381	30-July.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	09 ufc	-
382	30-July.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	09 ufc	-
383	30-July.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	08 ufc	-
384	30-July.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	06 ufc	-
385	30-July.-02	Line 2	Filling Valve	Sanitation	09 ufc	08 ufc	-

				Water			
386	30-July.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	08 ufc	-
387	30-July.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	06 ufc	-
388	30-July.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	05 ufc	-
389	31-July.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	09 ufc	-
390	31-July.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	08 ufc	-
391	31-July.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	07 ufc	-
392	31-July.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	09 ufc	-
393	1-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	03 ufc	-
394	1-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	06 ufc	-
395	1-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	05 ufc	-
396	1-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	05 ufc	-
397	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	07 ufc	-
398	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	06 ufc	-
399	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	08 ufc	-
400	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	05 ufc	-
401	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	04 ufc	-
402	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	05 ufc	-
403	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	02 ufc	-
404	2-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	05 ufc	-
405	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	03 ufc	-
406	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	05 ufc	-
407	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	02 ufc	-
408	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	02 ufc	-
409	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	07 ufc	-
410	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	10 ufc	-
411	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	09 ufc	-
412	3-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	09 ufc	-
413	5-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	05 ufc	-
414	5-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	07 ufc	-
415	5-Aug.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	06 ufc	-
416	5-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	06 ufc	-
417	7-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	02 ufc	-
418	7-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	02 ufc	-

419	7-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	06 ufc	-
420	7-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	09 ufc	-
421	8-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	05 ufc	-
422	8-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	07 ufc	-
423	8-Aug.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	02 ufc	-
424	8-Aug.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	06 ufc	-
425	8-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	04 ufc	-
426	8-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	07 ufc	-
427	9-Aug.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	07 ufc	-
428	9-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	09 ufc	-
429	9-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	03 ufc	-
430	9-Aug.-02	Line 2	Filling Valve	Sanitation Water	07 ufc	07 ufc	-
431	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	07 ufc	-
432	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	08 ufc	-
433	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	08 ufc	-
434	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	07 ufc	-
435	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	04 ufc	-
436	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	02 ufc	-
437	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
438	10-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
439	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	05 ufc	-
440	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	05 ufc	-
441	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	03 ufc	-
442	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	07 ufc	-
443	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	07 ufc	-
444	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	09 ufc	-
445	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	10 ufc	08 ufc	-
446	12-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	06 ufc	-
447	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	05 ufc	-
448	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	06 ufc	04 ufc	-
449	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	08 ufc	04 ufc	-
450	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	04 ufc	-
451	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	04 ufc	-
452	13-Aug.-02	Line 2	Filling Valve	Sanitation	04 ufc	02 ufc	-

				Water			
453	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
454	13-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
455	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
456	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	00 ufc	-
457	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	02 ufc	-
458	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	01 ufc	04 ufc	-
459	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	02 ufc	-
460	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	03 ufc	-
461	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	01 ufc	00 ufc	-
462	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	02 ufc	-
463	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	02 ufc	01 ufc	-
464	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	01 ufc	-
465	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	00 ufc	00 ufc	-
466	14-Aug.-02	Line 2	Filling Valve	Sanitation Water	01 ufc	02 ufc	-
467	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	03 ufc	-
468	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	08 ufc	-
469	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	08 ufc	-
470	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	03 ufc	-
471	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	04 ufc	-
472	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	05 ufc	-
473	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	05 ufc	-
474	15-Aug.-02	Line 2	Filling Valve	Sanitation Water	03 ufc	03 ufc	-
475	16-Aug.-02	Line 2	Filling Valve	Sanitation Water	04 ufc	06 ufc	-
476	16-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	05 ufc	-
477	16-Aug.-02	Line 2	Filling Valve	Sanitation Water	05 ufc	07 ufc	-
478	16-Aug.-02	Line 2	Filling Valve	Sanitation Water	09 ufc	07 ufc	-
479	17-Aug.-02	Line 2	Syrup Tank	Sanitation Water	08 ufc	05 ufc	-
480	17-Aug.-02	Line 2	Beverage Tank	Sanitation Water	07 ufc	07 ufc	-
481	6-Sep.-02	Syrup Room	Tank JT 4	Sanitation Water	00 ufc	00 ufc	-
482	6-Sep.-02	Syrup Room	Tank JT 3	Sanitation Water	01 ufc	00 ufc	-
483	6-Sep.-02	Syrup Room	Tank JT 2	Sanitation Water	01 ufc	01 ufc	-
484	6-Sep.-02	Syrup Room	Tank JT 1	Sanitation Water	01 ufc	00 ufc	-
485	6-Sep.-02	Syrup Room	Tank JT 5	Sanitation Water	00 ufc	00 ufc	-

486	6-Sep.-02	Syrup Room	Tank JT 1	Sanitation Water	00 ufc	00 ufc	-
487	6-Sep.-02	Syrup Room	Tank JT 11	Sanitation Water	00 ufc	02 ufc	-
488	7-Sep.-02	Syrup Room	Tank JT 6	Sanitation Water	02 ufc	01 ufc	-
489	7-Sep.-02	Syrup Room	Tank JT 9	Sanitation Water	00 ufc	00 ufc	-
490	7-Sep.-02	Syrup Room	Tank JT 4	Sanitation Water	00 ufc	00 ufc	-
491	7-Sep.-02	Syrup Room	Tank JT 3	Sanitation Water	01 ufc	02 ufc	-
492	7-Sep.-02	Syrup Room	Tank JT 1	Sanitation Water	00 ufc	00 ufc	-
493	7-Sep.-02	Syrup Room	Tank JT 11	Sanitation Water	00 ufc	01 ufc	-
494	9-Sep.-02	Syrup Room	Tank JT 5	Sanitation Water	00 ufc	00 ufc	-
495	9-Sep.-02	Syrup Room	Tank JT 10	Sanitation Water	00 ufc	00 ufc	-
496	9-Sep.-02	Syrup Room	Tank JT 3	Sanitation Water	01 ufc	00 ufc	-
497	9-Sep.-02	Syrup Room	Tank JT 1	Sanitation Water	00 ufc	01 ufc	-
498	10-Sep.-02	Syrup Room	Tank JT 4	Sanitation Water	00 ufc	00 ufc	-
499	10-Sep.-02	Syrup Room	Tank JT 5	Sanitation Water	03 ufc	01 ufc	-
500	10-Sep.-02	Syrup Room	Tank JT 6	Sanitation Water	01 ufc	00 ufc	-

The underlined tests in the above Table 4 correspond to inefficiencies in the preparation of the three culture mediums.

The culture medium composition of the invention keeps its characteristics and effectiveness after 6 months at 4°C and therefore it may be considered that the inventive composition has a long life, thus allowing to work with high production indexes.

#### Conclusions:

1. The culture medium composition of the invention allows the production costs of culture mediums used for quality controls to decrease because of the low costs of

its components as compared to other commercial culture mediums.

2. The components of the medium rapidly dissolve in an aqueous medium and the obtained composition does not require a filtration step for eliminating impurities.

3. The pH is easily adjusted.

4. The preparation of the inventive composition takes a short time.

5. The colonies grown in the composition are small thus making the counting thereof easier.

6. The composition may be prepared in large volumes and it is easily sterilized by techniques like autoclave, filtration.

7. The composition has an average life of one year at 4°C.

This invention is better illustrated in the following examples that should not be construed as restrictive to the scope of the invention. On the contrary, it should be clearly understood that, after reading the present disclosure, other embodiments, modifications and equivalents of the invention will be apparent to those persons skilled in the art without departing from the spirit of the invention and/or the scope of the appended claims.

Example 1

Method of elaborating the culture medium composition of the invention.

5.0 g of monobasic potassium phosphate, 1.0 of ammonium chloride, 1.0 g of heptahydrate magnesium sulfate and 40.0 g of D(+) saccharose have been mixed in a precipitate glass having a capacity for 1000 ml of final solution. Ultra pure water has been added up to 1 litre volume. The solution has been stirred or agitated by a magnetic stirrer up to having the components dissolved.

While maintaining a constant stirring a pre-calibrated and normalized electrode was introduced into the solution. The pH of the medium was measured and adjusted to a final 5 value by dripping a 1N sodium hydroxide solution.

The resulting solution was poured into an autoclave resistant flask and the flask was properly sealed. The medium was sterilized in autoclave at a temperature of 121°C for 15 min.

After the sterilization in autoclave the medium was conserved refrigerated at a temperature of about 4°C.

Example 2

Comparative analysis of the efficiency of the inventive composition and conventional culture mediums.

Fungi and yeast colonies have been dispersed in 500 ml ultra pure water and the following dilutions have been made  $1/10^2$ ,  $1/10^4$ ,  $1/10^6$ ,  $1/10^8$ ,  $1/10^{10}$ ,  $1/10^{12}$ ,  $1/10^{14}$ ,  $1/10^{16}$ ,  $1/10^{18}$ ,  $1/10^{20}$ .

In addition 12 Petri plates have been prepared for each culture medium. Each plate contained 2.5 ml of culture medium placed into the culture plate that had an absorbent surface "pad".

20 ml of each sample were spread into each plate and incubated at  $28^{\circ}\text{C}$  for 72 hours.

Comparative analysis were then carried out of samples taken from the sanitation water from the filling valves, as it is explained below.

Analysis of the sanitation samples:

After finishing the sanitation of the production line bacteriologic samples have been drawn of the final sanitation rinsing water. The samples have been taken from the filling valves after blazing thereof and the samples were placed into 120 ml sterile flasks. Then the samples were filtrated through a membrane with 0.8 micron pores, under entire aseptic conditions. The filters were removed and placed into Petri plates with pads and containing 3 ml of corresponding culture medium. Each plate was maintained for 72 hours at  $28^{\circ}\text{C}$  and the colonies were then counted.

Comparative analysis of fungi-contaminated samples were also carried out with such samples having different contamination levels or microorganisms contents.

To that purpose samples of water intentionally contaminated with fungi at high concentrations (higher than 400 ufc), half concentrations (close to 100 ufc) and low concentrations (below 10 ufc) have been prepared. The samples were filtrated through a membrane with 0.8 micron pores. The filters were removed and placed into Petri plates with pads and containing 3 ml of each culture medium. The plates were maintained at 28°C for 72 hours. After the incubation period the plates were removed and the colonies were counted.

Example 3

Study of the life of the inventive composition.

A flask containing 1000 ml of the inventive culture composition was placed in a room at 4°C, with the room properly sterilized.

Time tests of the life of the inventive composition were simultaneously carried out. To this purpose the culture medium was fractioned into 2.5 ml vials that were sterilized and conserved at 4°C. The vials were removed one by one for 6 months and their effectiveness for culturing fungi and yeast were tested. The test in Petri plates was the same disclosed in the prior Example. Samples

intentionally contaminated with fungi and yeast were employed as positive controls, and membranes through which the sterile culture medium was passed were employed as negative controls.

While preferred embodiments of the present invention have been illustrated and described, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the scope of the invention as defined in the appended claims.